

An evaluation of an online prescribing education system for the delivery of undergraduate medical student prescribing education

Sarah McDonald, Fran Bendall & Eilidh Clark - Senior Pharmacists, Prescribing Development & Education

Aim

To evaluate the use of an online prescribing education system for delivering prescribing education to medical students on medical and surgical teaching rotations in NHS Ayrshire & Arran.

Background

Within NHS Ayrshire & Arran a pharmacist-led prescribing education programme has been provided for medical students for over 15 years. Education sessions previously included prescribing case studies, with completion of mock prescription charts. Completion of paper charts is now less relevant to practice as most prescriptions are completed electronically. However, current electronic prescribing systems do not offer a suitable training environment for students. The use of an online prescribing education platform, utilised for the UK Prescribing Safety Assessment (UK PSA), was evaluated as an alternative.

ID : 104 Prescription Review 4 marks

Case presentation
A 76-year-old man is recovering on the care of the elderly ward following an ischaemic stroke earlier in the month. **PMH.** Hypertension, GORD, nocturnal enuresis, neuropathic pain. **DH.** His current regular medicines are listed (right). **SH.** Ex-smoker. Retired. Lives at home with wife. Normally independent.

Investigations
Na⁺ 129 mmol/L (137–144), K⁺ 3.9 mmol/L (3.5–5.3), U 6.3 mmol/L (2.5–7.0), Cr 88 µmol/L (60–110), eGFR 63 mL/min/1.73 m² (>60).

Question A
Select the THREE prescriptions that are *most likely* to be a cause of this patient's hyponatraemia.
(mark them with a tick in column A)

Question B
Select the ONE prescription that is *most likely* to have a significant interaction with clopidogrel.
(mark it with a tick in column B)

Medicine	Dose	Route	Frequency	A	B
amlodipine	10 mg	oral (PO)	daily	<input type="checkbox"/>	<input type="checkbox"/>
atorvastatin	80 mg	oral (PO)	daily	<input type="checkbox"/>	<input type="checkbox"/>
carbamazepine	400 mg	oral (PO)	twice daily (12-hrly)	<input type="checkbox"/>	<input type="checkbox"/>
clopidogrel	75 mg	oral (PO)	daily	<input type="checkbox"/>	<input type="checkbox"/>
desmopressin	200 micrograms	oral (PO)	nightly	<input type="checkbox"/>	<input type="checkbox"/>
omeprazole	20 mg	oral (PO)	daily	<input type="checkbox"/>	<input type="checkbox"/>
pregabalin	50 mg	oral (PO)	three times daily (8-hrly)	<input type="checkbox"/>	<input type="checkbox"/>

Figure 1. Example question.

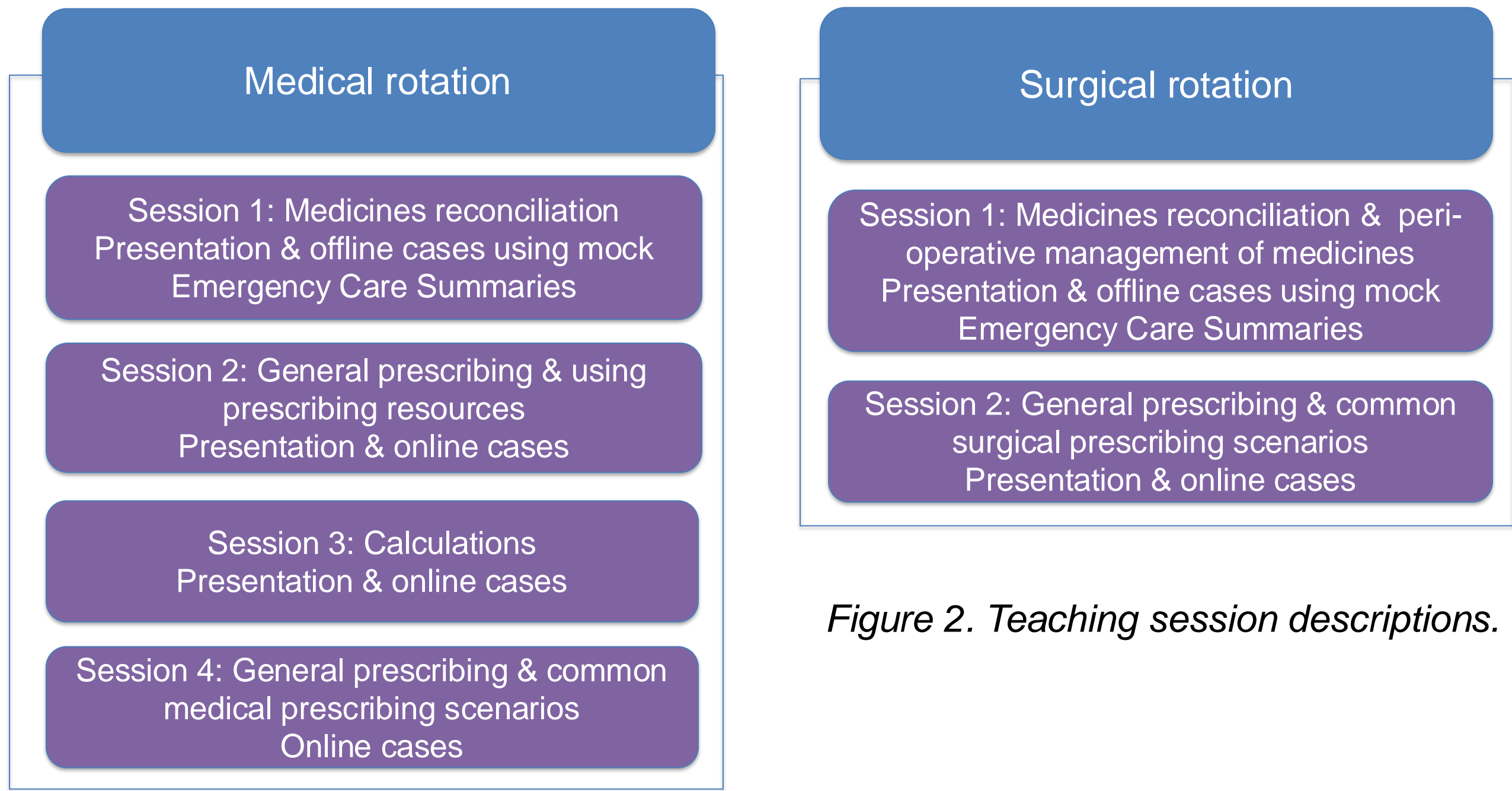


Figure 2. Teaching session descriptions.

Methods

- Teaching sessions were redesigned to include prescribing questions using the online platform (see figures 1 & 2). A mix of multiple choice, calculation and prescribing items were utilised.
- Questions were written in a similar style to the UK PSA and tested multiple aspects of prescribing decision-making, with immediate question-by-question feedback. This was supplemented by group discussion at the end of each session.
- Feedback on the system, and on the content and delivery of each session was obtained from students using an online feedback form.
- Verbal feedback was also sought from session facilitators.

Results

- Feedback was received from a total of 84 students over two 10-week medical and four 5-week surgical teaching rotations.
- Student feedback regarding the use of the online system and the content of the teaching sessions was positive (see figure 3).
- Students' comments reflected the value of the opportunity to practise making prescribing decisions and to become familiar with the platform and style of questions used in the UK PSA (see figure 4).
- Verbal feedback from facilitators was also positive, with a preference to continue this delivery method.
- Facilitators commented on the ability to cover a wider range of prescribing scenarios and learning points within each session using the online system and PSA-style questions.

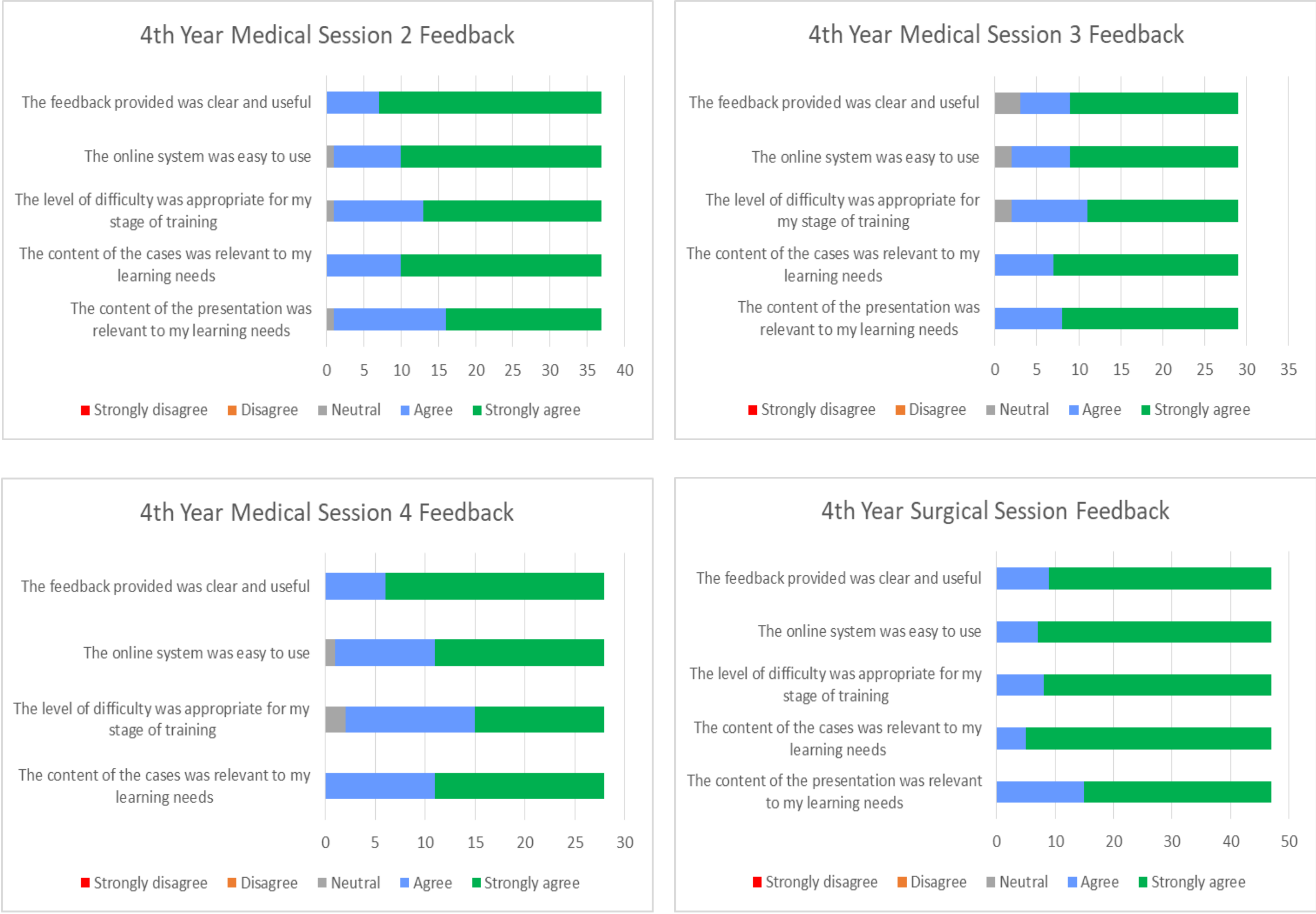


Figure 3. Student feedback from each session.



Figure 4. Student comments.

Conclusion and further development

- Evaluation of the use of this platform within mixed-method teaching sessions has been universally positive.
- Subject to funding this will be adopted within NHS A&A on a permanent basis.
- Pilot results will be shared with other boards within the region and with the medical school to support potential expansion to improve the provision of prescribing education and accessibility for all medical students.

Contact: sarah.mcdonald@aapct.scot.nhs.uk, frances.bendall2@aapct.scot.nhs.uk, eilidh.clark2@aapct.scot.nhs.uk

[@SarahLouise_McD](https://twitter.com/SarahLouise_McD)